Using On-Site Decision Making in the Site Assessment Process

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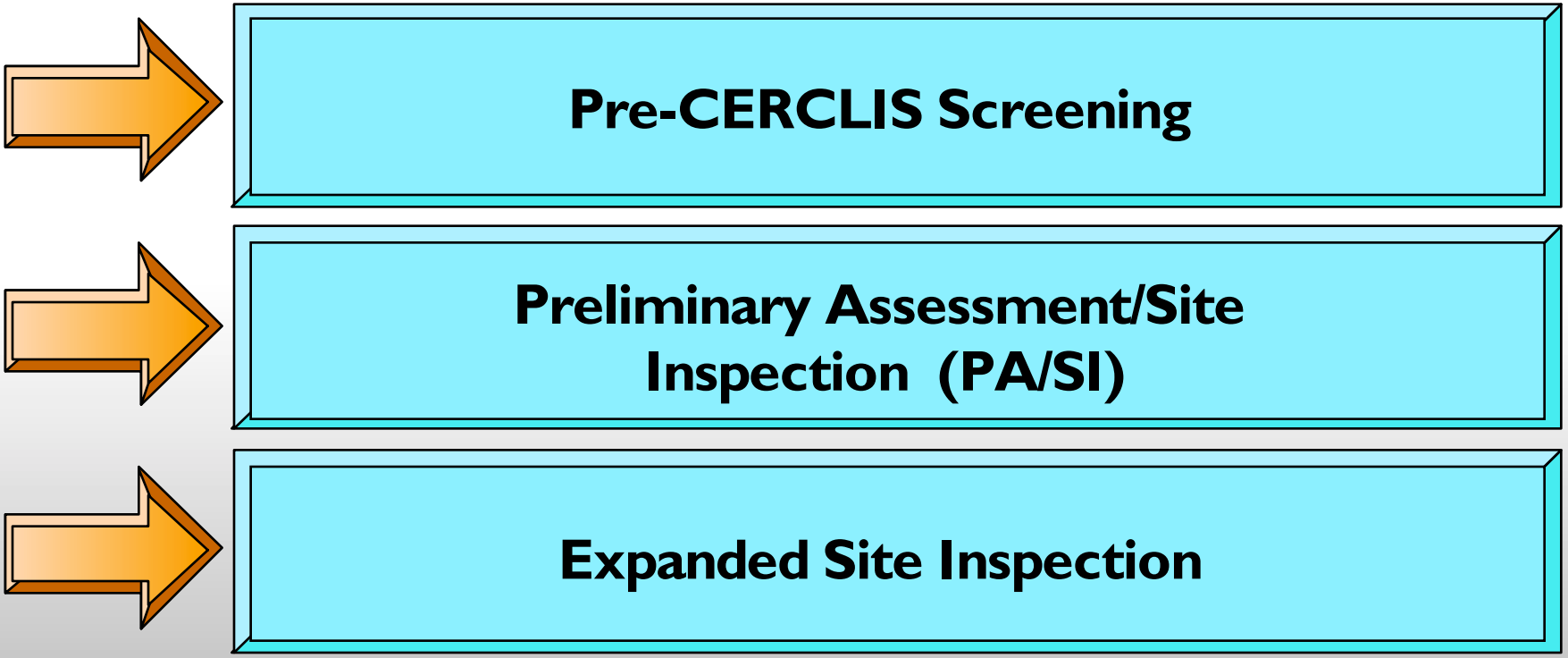
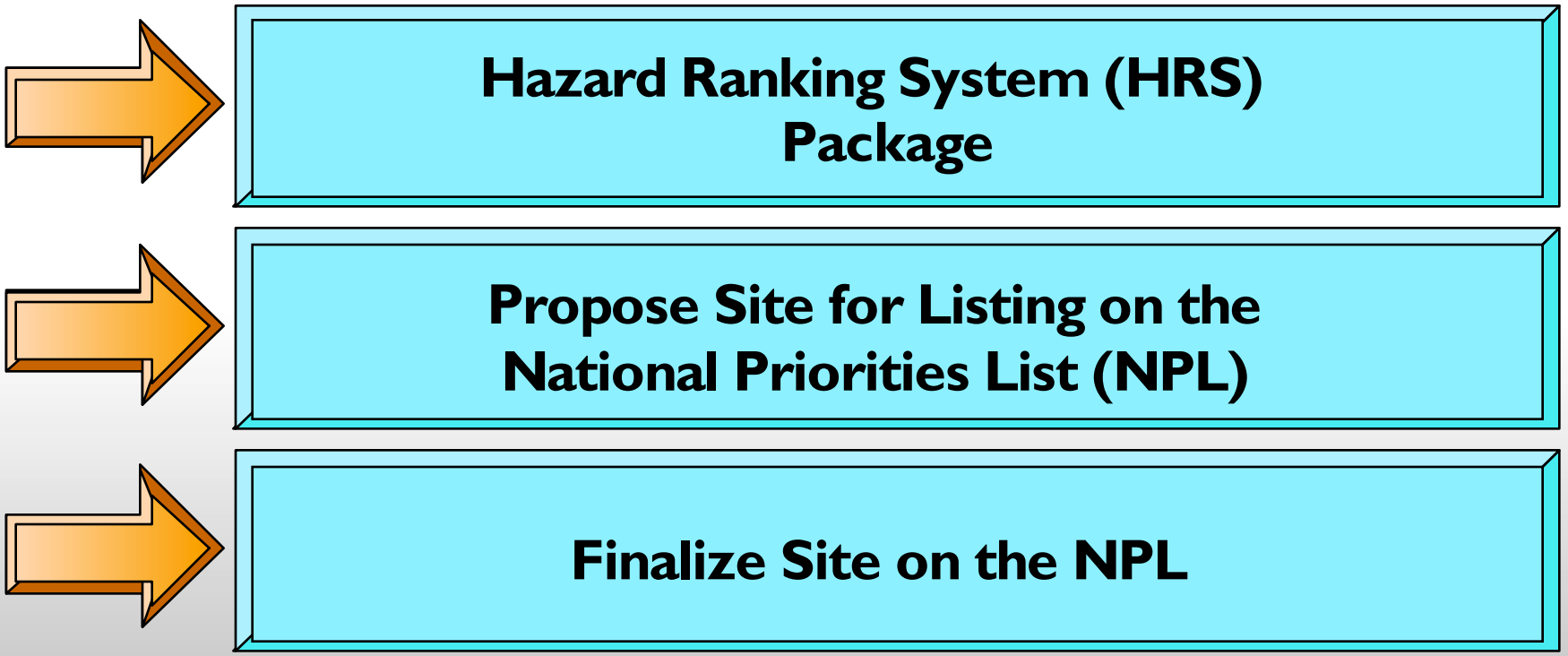
Site Assessment Screening Process



Site Assessment Process



Site Assessment Process

- Step-wise process, which allows for the screening out of sites that do not warrant further investigation
- Allows for many sites to be screened efficiently
- Allows for the identification of the worst sites, those that warrant placement on the NPL

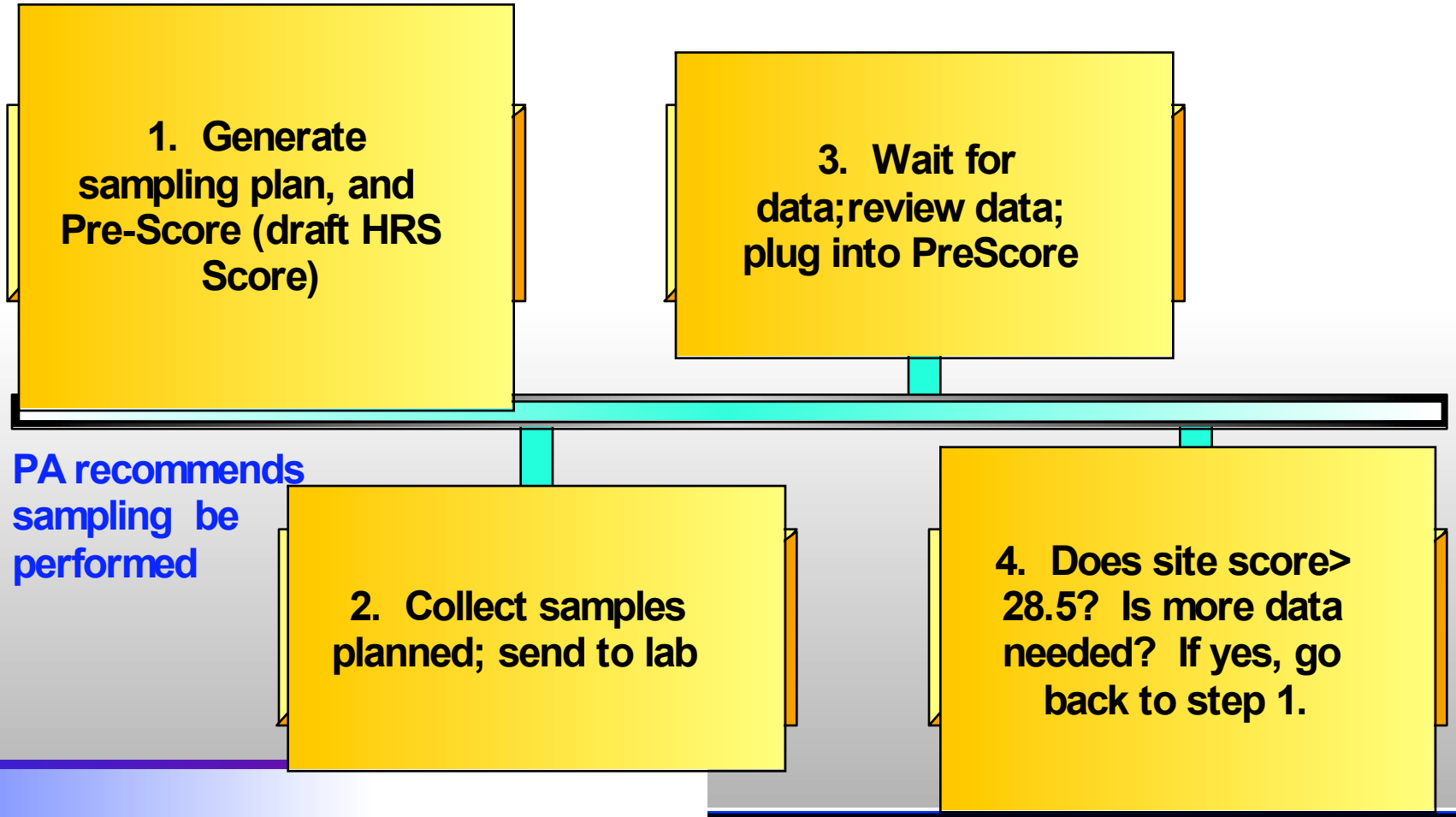
Site Assessment Process

- The goal of the PA/SI process is not to identify the full extent of contamination.
- The goal is to identify whether the site scores > 28.5, and is eligible for the NPL.
- By gathering enough information to score the site for the NPL, the site will be eligible for an RI/FS.
- May identify the need for a removal action during the site assessment process

Hazard Ranking System (HRS) Model- the Foundation of the Site Assessment Process

- **Sampling is based on HRS requirements**
- **HRS model is a risk based model that evaluates various migration and exposure pathways**
- **Likelihood of exposure (soil) x Waste Characteristics x Targets**

Use of the Hazard Ranking System (HRS) Model in Planning



What drives the HRS Score? (Jacobsville Neighborhood Soil Site)

- At this site, the pathway of concern is soil exposure
- The contaminant of concern is lead
- How many targets are needed for a PreScore > 28.5?

Targets

- The data showed that there was significant lead contamination in residential soils in this neighborhood. The first sampling event identified the lead contamination, but the standard, fixed sampling plan approach was not going to work well. The HRS score is based solely on the soil exposure pathway, and multiple sampling events would be needed using the standard approach.

Using a dynamic sampling plan approach, with in-field analyses

- By taking an approach that used field XRF screening to identify whether the targets could be counted, the dynamic sampling plan allowed for the next sampling locations to be determined by the previous sampling location screening data. This process allowed for sampling to continue outward from the area of known contamination until sufficient targets were identified.

- The Indiana Department of Environmental Management (IDEM) worked with U.S. EPA to develop and implement this sampling program.
- Mark Jaworski was the lead investigator at IDEM on this site, and he was assisted by other IDEM staff members, including Andrea Robertson.
- Sampling occurred last summer, and a draft HRS package is underway at IDEM.